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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
KOVALICK, VINCENT E	

ART UNIT	PAPER NUMBER
2629	

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07/29/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/775,765	HERRMANN, FREDERICK P.	
	Examiner	Art Unit	
	VINCE E. KOVALICK	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 March 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/28/04 & 9/20/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The Office Action is in response to Applicant's Amendment dated March 3, 2008 in response to USPTO Office Action dated November 28, 2007

The addition of new claim 21 is noted and entered in the record.

.Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made

3. Claims 1, 10 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art (APA) taken with Jenssen et al. (Pub. No. US 002/0135557).

Relative to claims 1, 12 and 21, Admitted Prior art (APA) as shown in Fig. 1 in the drawings of the instant invention **teaches** a row buffer (item 110) inputting digital data from a data bus (item 130) to a row buffer for input to digital to analog converters (item 140). This feature being well know to a person of ordinary skill in the art, at the time of the invention, and in common practice.

The said prior art **does not teach** and a switch network coupled to the row buffer, the switch network converting digital data received from the row buffer to analog data using

column load capacitances on pairs of column lines of the LCD.

Janssen et al. **teaches** column driving circuit and method for driving pixels in a column row matrix (pg. 2, para. 27); Jenssen et al. further **teaches** a switch network coupled to the row buffer, the switch network converting digital data received from the row buffer to analog data using column load capacitances on pairs of column lines of the LCD (pg. 2, para. 0027 and Fig. 3).

It would have been obvious to a person of ordinary skill in the art the time of the invention to provide to the device as taught in the APA the feature as taught by Jenssen et al. in order to provide the means to distribute the analog signals down the separated column lines.

4. Claims 2-8 and 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA taken with Jenssen et al. as applied to claim1in item 3 hereinabove, and further in view of Edwards et al. (Pub. No. US 2002/0054005).

Regarding claims 2 and 11, APA taken with Jenssen et al. **does not teach teaches** a switch network coupled to the row buffer.

Edwards et al **teaches** a Matrix display device (pg. 1, paras. 0001-0007); Edwards et al. further a data scanner wherein the switch network includes a plurality of switching devices, each switching device coupled to a respective pair of column lines of the LCD (pg. 3, para. 28 and Fig. 7)

It would have been obvious to a person of ordinary skill in the art the time of the invention to provide to the device as taught in the APA taken with Jenssen et al. the feature as taught by Edwards et al. in order to put in place the switching means to direct the image signals to the desired column lines.

Regading claims 3 and 12, Edwards et al. further **teaches** the data scanner wherein each switching device includes: a logic circuit, the logic circuit receiving digital data from the row buffer; at least three MOSFETs, the MOSFETs converting the received digital data received from the logic circuit to analog data and transmitting the analog data through respective column lines (pg. 3, para. 28 and Fig. 7).

As to claims 4-6 and 13-15, Edwards **teaches** the said data scanner wherein the MOSFETs are n-channel MOSFETS; or, the MOSFETs are p-channel MOSFETS; or, the MOSFETs are a combination of n-channel MOSFETS and p-channel MOSFETs (pg. 3, para. 24). It being understood by a person of ordinary skill in the art that if either n-channel or p-channel fit the logic design, the combination can be set to fit the said logic design.

Relative to claims 7 and 16, Jenssen et al**. teaches** a data scanner where a first column line of the pair of column lines is coupled to alternating pixels in a first column of pixels and a second column line of the pair of column lines is coupled to alternating pixels in a second column of pixels, the pixels of the first column line being in alternating rows with respect to the pixels in the second column line (Fig. 3).

Regarding claims 8 and 17, Jenssen et al**. teaches** a data scanner where the pixels are arranged in a rectangular layout (Fig. 3).

Regarding claims 19-20, Jenssen et al**. teaches** a data scanner wherein the switch network converts digital data received from the row buffer to analog data using column load capacitances on pairs of column lines of the LCD, the pairs of column lines including at least a first column line and a second column line, the switch network being connected to each of the first and the second column lines; and wherein the first and the second column lines are separated, and spaced from one another (Fig. 3).

5. Claims 9-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA taken with Jenssen et al. as applied to claim7 in item 4 hereinabove, and further in view of Hashimoto (USP 5,619,225).

Regarding claims 9 and 18, APA taken with Jenssen et al. **does not teach** said data scanner wherein the pixels are arranged in a rectangular layout..
Hashimoto **teaches** a Liquid Crystal Display apparatus and method of driving same (col. 5, lines 14-67 and col. 6, lines 1-67); Hashimoto further **teaches** said data scanner wherein the pixels are arranged in a rectangular layout.(col. 2, lines 19-37 ; col.3, lines 17-36 and Figs. 3 and 5).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Janssen et al. the feature as taught by Hashimoto produce a LCD with improved horizontal and vertical resolutions and is capable of displaying a high quality image free from flicker.

Response to Applicant's Argument

6. Applicant's argument filed March 3, 2008 have been fully considered but they are not persuasive.

Both Janssen et al. (US 2002/0135557) and Sekine (2003/0146896) teach pairs of lines emanating from a DAC with both column lines in the pair having a capacitance which in turn lend those capacitances to the load capacitance of the column line pair. See Janssen et al. Fig. 3 and Sekine Fig. 7.

To Respond

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VINCE E. KOVALICK whose telephone number is 571-272-7669.

The examiner can normally be reached on Monday-Thursday 7:30- 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Vincent E Kovalick/
Examiner, Art Unit 2629
July 18, 2008

/Bipin Shalwala/
Supervisory Patent Examiner, Art Unit 2629